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**BBC**

**Passive smoking increases stillbirth risk, says study**

Fathers-to-be should stop smoking to protect their unborn child from the risk of stillbirth or birth defects, scientists say.

University of Nottingham researchers found that pregnant women exposed to smoke at work or home increased their risk of stillbirth by 23% and of having a baby with defects by 13%.

They looked at 19 previous studies from around the world.

A UK expert said it was "vital" women knew the risks of second-hand smoke.

The studies used to pull this research together were carried out in North America, South America, Asia and Europe.

All the studies focused on pregnant women who did not smoke themselves but were passive smokers due to their proximity to a partner who smoked or work colleagues who smoked.

The combined data from the studies suggests that being exposed to more than 10 cigarettes a day is enough for the risks to be increased.

However, the University of Nottingham study did not find an increased risk of miscarriage or newborn death from second-hand smoke - only an increased risk of still birth and birth defects.

The results did not point to a link with any specific congenital birth defect.

Impact on sperm development

The researchers say fathers who smoke should be more aware of the danger they pose to their unborn child.

Previous research has shown that women who smoke during their pregnancy create serious health risks for their unborn baby, including low birth weight, premature birth and a range of serious birth defects such as cleft palate, club foot and heart problems.

Dr Jo Leonardi-Bee, lead researcher of the study and associate professor in medical statistics at the University of Nottingham, said they still did not know when the effects of the second-hand smoke begin.

"What we still don't know is whether it is the effect of sidestream smoke that the woman inhales that increases these particular risks or whether it is the direct effect of mainstream smoke that the father inhales during smoking that affects sperm development, or possibly both.

"More research is needed into this issue although we already know that smoking does have an impact on sperm development, so it is very important that men quit smoking before trying for a baby."

Dr Leonardi-Bee added: "The risks are related to the amount of cigarettes that are smoked so it is therefore very important for men to cut down.

"Ultimately though, in the interests of their partner and their unborn child, the best option would be to give up completely."

Andrew Shennan, professor of obstetrics at St. Thomas' Hospital in London and spokesperson for baby charity Tommy's, said: "It is vital that women are made aware of the possible risks associated with second-hand smoke and alert those around them of the impact it could potentially have on the health of their unborn baby.

"The chemicals in cigarettes are known to significantly increase the risk of serious pregnancy complications."

**REUTERS**

**Secondhand smoke tied to higher birth defect risk**

(Reporting by Kerry Grens at Reuters Health;editing by Elaine Lies)

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Women exposed to second-hand smoke while pregnant are more likely to experience a stillbirth or have babies with birth defects, according to an analysis.

Stillbirth was 23 percent more common and birth defects were 13 percent more common among women who lived or worked with smokers, according to a report published in Pediatrics.

"Women need to be protected from passive smoke exposure before conception and throughout pregnancy," said Jo Leonardi-Bee, a professor at the University of Nottingham in England and one of the authors of the study, in an email to Reuters Health.

Although the increased risks of stillbirth and birth defects are not massive, she warned: "They are a lot larger in magnitude than one would anticipate if we believe that passive smoke only has one percent of the effect of active smoking."

Leonardi-Bee and her colleagues combined data from 19 studies that looked at the effects of sceondhand smoke on the rates of miscarriage, newborn death and birth defects.

The rates of miscarriage and newborn death were similar whether or not women were exposed to secondhand smoke, and when looked at individually, no single birth defect was linked to secondhand smoke.

Only when the researchers pooled the data on all birth defects did they see an increased risk.

None of the women smoked while pregnant, but they breathed in secondhand smoke from colleagues or family members.

In half the studies analyzed, fathers were the primary source of secondhand smoke.

Other medical experts said that the research confirmed what many doctors have assumed about the risks of secondhand smoke, though the findings did not prove that tobacco smoke causes birth defects or stillbirths.

Even if it did, it was unclear if this was due to the mother inhaling the father's secondhand smoke or if his smoking was affecting his sperm.

Stephen Grant of Magee-Womens Research Institute in Pittsburgh, Pennsylvania, who wasn't involved in the study, said he was most intrigued by the association between secondhand smoke and birth defects.

"What we have here is that it's possible all the chemicals in tobacco smoke could have some effect on development," he told Reuters Health.